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U. S. DEPARTMENT OF AGRICULTURE

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 10 December 16, 1960 Number 51

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

CHINCH BUG hibernation surveys completed in Illinois, Arkansas, Kansas, Oklahoma and Nebraska. Very severe ratings recorded in Leavenworth and Harvey Counties, Kansas, and Cotton County, Oklahoma. Severe ratings recorded in 3 Illinois counties; Washington County, Oklahoma; and Chase, Coffey, Osage, Allen and McPherson Counties, Kansas. GREENBUG controls applied to limited acreage of small grains in Jefferson and Kingfisher Counties, Oklahoma. (p. 1132).

CITRUS RED MITE increasing and CITRUS RUST MITE increased to a very high level in citrus by end of November in Florida. (p. 1133).

MOUNTAIN PINE BEETLE may attack approximately 40 percent more white pine trees in Canyon and Bungalow Ranger Districts of Clearwater National Forest, Idaho, in 1961. (p. 1134).

INSECT DETECTION: New state records for Kentucky were a weevil (Apion longirostre) (p. 1134) and Asiatic oak weevil (p. 1135).

INSECTS not known to occur in the United States. (p. 1137).

Reports in this issue are for week ending December 9, unless otherwise indicated.

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WEATHER OF THE WEEK ENDING DECEMBER 12

Persistent abnormally low temperatures in the Far West and the season's first major snow storm in the East features this week's weather. An almost continuous inflow of cold northern air into the Far West kept temperatures below normal, and weekly averages ranging from 3° to 15° below normal were generally 5° to 10° lower than for the previous week. Freezing occurred at many locations along the Pacific coast as far south as Santa Maria, California, and southward in the Interior to Tucson, Arizona, and El Paso, Texas. East of the Rocky Mountains, the week was slightly warmer than the previous week in southern areas and a little colder in the North. Maximum temperatures reached record high levels in the 40's and 50's in the Great Lakes Region on the 5th and in the Northeast on the 6th and 7th. This mild period was followed by a cold air intrusion which reduced temperatures to subzero levels in extreme northern areas, with a low of -24° at International Falls, Minnesota, on the 8th. All lakes and streams are now frozen over in Minnesota. Lowest temperatures in the Northeast were recorded on the 11th and 12th, when minima generally were below zero in upper New York and northern New England, with lows of -28° at Stillwater Reservoir, New York, on the 11th and -8° at Houlton, Maine, on the 12th. Freezing, however, extended to northern portions of Mississippi, Alabama and Georgia by the end of the period.

The week's precipitation exceeded 1/2 inch along the North Pacific coast, in eastern North Dakota and northern Minnesota, eastern Arizona, southern New Mexico, and the Southeastern quarter of the Nation except Florida and southern portions of Georgia and Alabama, where amounts were less. Most of the precipitation in southern and eastern areas fell during the passage of a storm system which developed in the Far Southwest on the 9th and 10th and moved east-northeastward, reaching the Virginia coast on the 11th. Precipitation was in the form of snow from New Mexico

(Weather continued on page 1136)

CEREAL AND FORAGE INSECTS

CHINCH BUG (Blissus leucopterus) - ILLINOIS - Hibernation survey completed. Infestation ratings were severe in 3 counties, moderate in 11 counties and light in 12 counties. In 1959, the infestation ratings were severe in 6 counties, moderate in 2 counties and light in 11 counties. (Ill. Ins. Rpt.). ARKANSAS - Annual hibernation survey showed a decline in populations as compared with 3 previous years. Only moderate populations (500-1,000 per square foot) found in Lawrence and Monroe Counties. Other 16 counties surveyed had noneconomic populations. Monroe County's relatively high average count was due to a very high count of 3,020 bugs per square foot in one sample rather than a relatively high count of several samples. (Ark. Ins. Sur.). OKLAHOMA - Infestation for Washington County rated as severe. County omitted from results of survey reported in CEIR 10(49): 1111. Other ratings reported showed infestation very severe in Cotton County, moderate in Comanche, Okmulgee and Ottawa Counties and light or noneconomic in other areas surveyed. (Okla. Coop. Sur.). KANSAS - Annual hibernation survey completed. Collections of two-square-foot samples of bunch grass made during November and December. Results were as follows: 2 counties classified very severe (Leavenworth, Harvey), ranging from 2,038 to 2,623 bugs per square foot; 5 counties severe (Chase, Coffey, Osage, Allen, McPherson), ranging from 1,129 to 1,989 bugs per square foot; 7 counties moderate, ranging from 744 to 931 bugs per square foot; 10 counties light, ranging from 268 to 452 per square foot; and 32 counties noneconomic, ranging from 3 to 237 bugs per square foot. (Fitchett, Hohnholt, Peters). NEBRASKA - Fall hibernation survey showed populations light and scattered. Counties showing light counts were Burt, Gage, Johnson, Lancaster, Otoe and Pawnee. (Bell).

GREENBUG (Toxoptera graminum) - OKLAHOMA - Populations continued light in fields of small grain previously reported infested in western two-thirds of State. Light infestations in fields of grain planted for winter pasture in localized areas of Okmulgee County. Chemical controls reportedly applied to limited acreage in Jefferson and Kingfisher Counties. (Okla. Coop. Sur.). TEXAS - Found in only 5 fields in 3 counties (Waller, Grimes and Brazos) in survey of small grains in central and south central areas. Infestations generally light, averaging 1-10 per foot of row. No damage apparent. (Chada, Nov. 28-Dec. 2).

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - Light infestations on central area barley. (Ariz. Coop. Sur.).

A ROOT APHID (Rhopalosiphum rufiabdominalis) - OKLAHOMA - Populations decreased sharply in infested fields of small grains in Okfuskee County. Reported (unconfirmed) infesting some grain fields in localized area of Creek County. (Okla. Coop. Sur.).

A CUTWORM - OKLAHOMA - Light infestations of early instar larvae of an unidentified species continued in small grain fields in Kingfisher County. (Okla. Coop. Sur.).

A BLISTER BEETLE (Meloe angusticollis) - NORTH CAROLINA - Adults feeing on rye, oats, turnips and in pastures in Burke County. (Spears, Farrier).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Infestations reported in Russell and Pottawatomie Counties. (Gates)

WHEAT CURL MITE (Aceria tulipae) - KANSAS - Early planted wheat in Barton, Ellsworth, McPherson, Saline, Stafford and Reno Counties showed light to heavy infestations. Late-planted wheat in same areas showed none to trace infestations. This represents little change from previous surveys this year. (Somsen).

WINTER GRAIN MITE (Penthaleus major) - OKLAHOMA - Light in few fields of small grain in localized area of Kingfisher County. (Okla. Coop. Sur.). TEXAS - Light infestations in 16 fields in central counties of McLennan, Bell, Williamson, Travis, Hill, Kerr and Milam. Heaviest infestations ran less than 10 per foot and no apparent damage occurred. (Chada, Nov. 28-Dec. 2).

A GRASS MITE (Aceria neocynodonis) - CALIFORNIA - Heavy populations occurring on Bermuda grass in Compton, Los Angeles County. (Cal. Coop. Rpt.).

A WHITEFLY - ARIZONA - Honeydew left by previous infestations causing considerable trouble in harvesting of Yuma County Bermuda grass seed. (Ariz. Coop. Sur.).

GROUND MEALYBUG (Rhizoecus falcifer) - CALIFORNIA - Medium infestations on roots of Stephanotis and grasses in Palo Alto, Santa Clara County. (Cal. Coop. Rpt.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Common in alfalfa in Kingfisher and Noble Counties. (Okla. Coop. Sur.).

LONG-TAILED MEALYBUG (Pseudococcus adonidum) - CALIFORNIA - Medium populations on New Zealand flax in Anaheim, Orange County. (Cal. Coop. Rpt.).

FRUIT INSECTS

Citrus Insect Situation in Florida - End of November - PURPLE SCALE (Lepidosaphes beckii) infested 65 percent of groves inspected. Activity and populations will continue to be low in all districts. FLORIDA RED SCALE (Chrysomphalus aonidum) infested 73 percent of groves. Activity has taken downward trend which will continue during December. Populations now at average level and generally will be in low range through the winter. Districts now with high activity have more than 70 percent of scales in young stages. Activity is high in upper east coast and Bartow districts. CITRUS RED MITE (Panonychus citri) infested 52 percent of groves. Although there is a decline in activity, an upward trend is developing. Statewide population is still below average, but infestations are very spotty. Most districts now have a few heavy infestations and more are expected in December. Activity is heavy in upper east coast and Bartow districts. CITRUS RUST MITE (Phyllocoptruta oleivora) infested 85 percent of groves, and activity increased to a very high level. A gradual decline is expected to begin in early December. Populations on leaves and fruit are near highest record for this time of year and will continue high for several weeks in most districts. High activity is present in Bartow, Gainesville, Orlando, west coast, Ridge, Brooksville and Indian River districts. (Simanton, Thompson, Johnson (Citrus Exp. Sta., Lake Alfred)).

YUMA SPIDER MITE (Eotetranychus yumensis) - ARIZONA - Light to medium populations continue in citrus groves and citrus nurseries in Yuma County. (Ariz. Coop. Sur.).

A LEAFHOPPER (Alconeura unipuncta) - CALIFORNIA - Light adult population infesting pineapple, guava and miscellaneous plants in Turlock, Stanislaus County. (Cal. Coop. Rpt.).

BLACK-MARGINED APHID (Monellia costalis) - CALIFORNIA - Light infestation on pecan trees east of Clovis, Fresno County. (Cal. Coop. Rpt.).

SPRINGTAILS - CALIFORNIA - Light populations of Entomobrya nivalis and E. atrocincta occurring in pecan husks and nuts in Clovis, Fresno County. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

GREEN PEACH APHID (Myzus persicae) - ARIZONA - Light infestations on sugar beets in Maricopa County. (Ariz. Coop. Sur.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

MOUNTAIN PINE BEETLE (*Dendroctonus monticolae*) - IDAHO - A biological evaluation of infestations in old-growth western white pine stands within Canyon and Bungalow Ranger Districts, Clearwater National Forest, in September, on over 40,000 acres of these 2 ranger districts, indicated that approximately 40 percent more trees may be attacked in 1961 than were attacked and killed in 1960. These districts have been infested since 1934. Localized infestations also reported in Coeur d'Alene, St.Joe,Kaniksu and Kootenai National Forests in mature white pine type. (Tunnock, Jr.).

ENGLEMANN SPRUCE BEETLE (*Dendroctonus engelmanni*) - IDAHO - A few current infestations reported this season in the Sandpoint and Bonners Ferry Ranger Districts, Kaniksu National Forest. (Tunnock, Jr.).

A PINE ENGRAVER (*Ips oregonis*) - IDAHO - Reported in western white pine slash during July in Coeur d'Alene National Forest. (Tunnock, Jr.).

PINE BUTTERFLY (*Neophasia menapia*) - IDAHO - An endemic number of adults spotted flying around tops of western white pine trees in Clearwater National Forest. (Tunnock, Jr.).

COOLEY SPRUCE GALL APHID (*Chermes cooleyi*) - IDAHO - Light infestation on a blue spruce in Pinehurst. (Tunnock, Jr.).

A PINE RESIN MIDGE (*Retinodiplosis* sp.) - IDAHO - Only 300 acres in Quartz Creek and Priest River drainages in Kaniksu National Forest damaged in 1960, a considerable reduction in acreage damaged in 1959. (Tunnock, Jr.).

AN ELM FLEA BEETLE (*Altica carinata*) - PENNSYLVANIA - Congregating in numbers around trunk and base of elms in Warren County on December 1. (Adams).

A WEEVIL (*Apion longirostre*) - KENTUCKY - Found on hollyhock at Lexington, Fayette County, on July 9. Det. by R. E. Warner. This is the first record of the species in the State. (Townsend).

FULLER ROSE BEETLE (*Pantomorus godmani*) - NORTH CAROLINA - Adults causing light injury to Japanese holly at edge of park in Hoke County. (Chadwick, Farrier).

HAWTHORN LACE BUG (*Corythucha cydoniae*) - PENNSYLVANIA - Caused moderate to severe injury to *Pyracantha* in Philadelphia in November. (Menusan).

BARNACLE SCALE (*Ceroplastes cirripediformis*) - CALIFORNIA - Heavy infestation on gardenia and *Fuchsia* sp. in Fresno, Fresno County. (Cal. Coop. Rpt.).

Greenhouse Pests in Oklahoma - Light infestations of APHIDS, heavy but localized infestations of SPIDER MITES and spotted infestations of MEALYBUGS continued to cause concern in some greenhouses checked in the central and east central areas. (Okla. Coop. Sur.).

INSECTS AFFECTING MAN AND ANIMALS

MOSQUITOES - TEXAS - *Culex* sp. occurred in unprecedented numbers, due probably to a very warm fall. First frost was November 28. *Aedes vexans* still present. *Psorophora howardii* active, being last taken just before the first frost. *Anopheles crucians* about the same as in October, *Uranotaenia lowii* and *U. sapphirina* both found in southern traps and *Culiseta inornata* occurred in considerable numbers. (Tex. Coop. Rpt.).

FACE FLY (Musca autumnalis) - PENNSYLVANIA - Quite abundant in attic of home at Altoona, Blair County, on November 8. Pollenia rudis also present. (Udine).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Counts averaged 22 larvae per animal (ranged 0-62 per animal) on 226 steers checked in Woodward and Harper Counties. (Okla. Coop. Sur.).

LICE - UTAH - Treatments for lice conducted on 200 cattle in Garfield County, recently, and 3,800 cattle in eastern Millard County. (Knowlton, County Agents; Dec. 6). OKLAHOMA - Linognathus vituli infested only one of 220 head of steers checked in Woodward and Harper Counties, but was common on cattle checked in Atoka County. Haematopinus suis infesting a limited number of hogs checked in Creek, Woodward and Harper Counties. (Okla. Coop. Sur.).

BLACK WIDOW SPIDER (Lactrodectus mactans) - PENNSYLVANIA - Very heavy infestation on property in Chester on November 10. (Meyer).

STORED-PRODUCT INSECTS

WAX MOTHS - UTAH - Caused damage to stored honeycombs in a large storehouse at Roosevelt, Duchesne County. (Knowlton, Dec. 6).

DRUG-STORE BEETLE (Stegobium paniceum) - ARIZONA - Medium populations in some stored Bermuda seed in Yuma County. (Ariz. Coop. Sur.).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - NEBRASKA - Extensive trapping conducted at major airports, railroad yards and military bases from May through September. No positive finds recorded. Spot checks made on 27 planes arriving from eastern airports also produced negative results. (Bell).

ASIATIC OAK WEEVIL (Cyrtepistomus castaneus) - KENTUCKY - Entered a hospital at Harlan, Harlan County, on August 30 and created a nuisance. Det. by R. E. Warner. This is the first record of this species in the State. (Townsend).

A POWDER POST BEETLE (Trogoxylon aequale) - CALIFORNIA - Medium infestation in bamboo drapes in a home in Richmond, Contra Costa County. (Cal. Coop. Rpt.).

AN APHID (Lachnus salignus) - PENNSYLVANIA - Migration to side of house heavy in Blair County on November 8. (Udine).

EARWIGS - LOUISIANA - Becoming a nuisance in homes in Baton Rouge and New Orleans again. Species probably Euborellia annulipes. (Spink).

SPRINGTAILS - CALIFORNIA - Hypogastrura armata and Entomobrya unostrigata populations heavy, causing a nuisance on surface of a swimming pool in Garden Grove, Orange County. (Cal. Coop. Rpt.).

CLOVER MITE (Bryobia praetiosa) - PENNSYLVANIA - Abundant and considerably active around windows of homes in Montgomery and Centre Counties last week of November. (Gesell, Menusan).

MILLIPEDES - VIRGINIA - A general nuisance around homes in Fairfax, Fairfax County, on December 1 (Beard, Tarpley) and at Leesburg, Loudoun County, on December 5. (Brown, Rowell).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Laphyg. frug.	Prod. ornith.	Agrot. ips.	Perid. saucia	Feltia subterr.	Helio. zea
ARIZONA							
Mesa 11/27-12/4			2		5		
LOUISIANA							
Baton Rouge 12/2-8	13	4	5	4		9	
SOUTH CAROLINA							
Charleston 12/5-11	4			28		7	
TEXAS							
*Brownsville 11/19-25	61	35	11	39	34	7	4

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* Four traps - Brownsville

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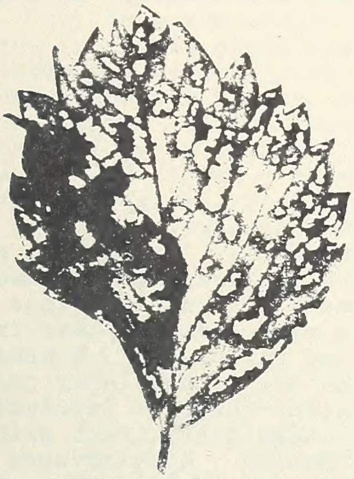
(Weather continued from highlight page)

and west Texas northeastward to the Middle Atlantic and New England States. Snow ranged up to 18 inches in southern New Mexico, from 4 to 5 inches in west Texas, 5 to 10 inches in extreme western Oklahoma, 4 to 5 inches in most of Kansas, and across central portions of Missouri, Illinois, Indiana, and most of Ohio and West Virginia. Much heavier amounts fell in the Coastal States from northern Virginia to New England on the 11th and 12th, with depths ranging up to a foot or more at many stations. Precipitation was in the form of rain in central and eastern Texas and the remaining Southern states. Totals ranged up to 7 inches in eastern Texas, where flooding occurred along many streams. (Summary supplied by U. S. Weather Bureau).

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

STRAWBERRY LEAF BEETLE (Galerucella tenella L.)

Economic Importance: This chrysomelid is an important pest of strawberry plants throughout many areas of Europe. Sporadic outbreaks of the pest have caused considerable reduction of yield in some areas. The insect does not generally kill the plants, but if infestation occurs two years in a row, the crop is considerably reduced. Larvae and adults feed on the lower and upper epidermis of the leaves and on the soft underlying tissue of strawberries, leaving opposite layer of epidermis intact. Leaves present a characteristic spotted appearance. If leaves are weathered, they will appear as if regular holes had been eaten out.

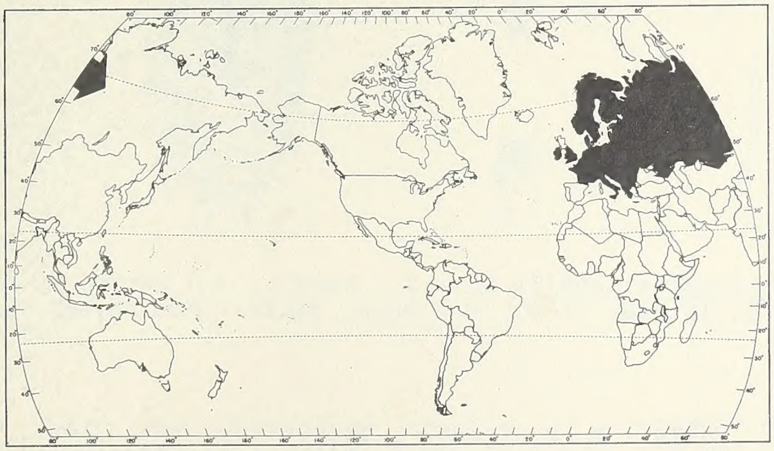


Damage to Strawberry Leaf

Hosts: Strawberry, ladysmantle (Alachemilla sp.), European meadowsweet, spiraea.

Distribution: Occurs throughout most of Europe and extends into western Siberia in Asia.

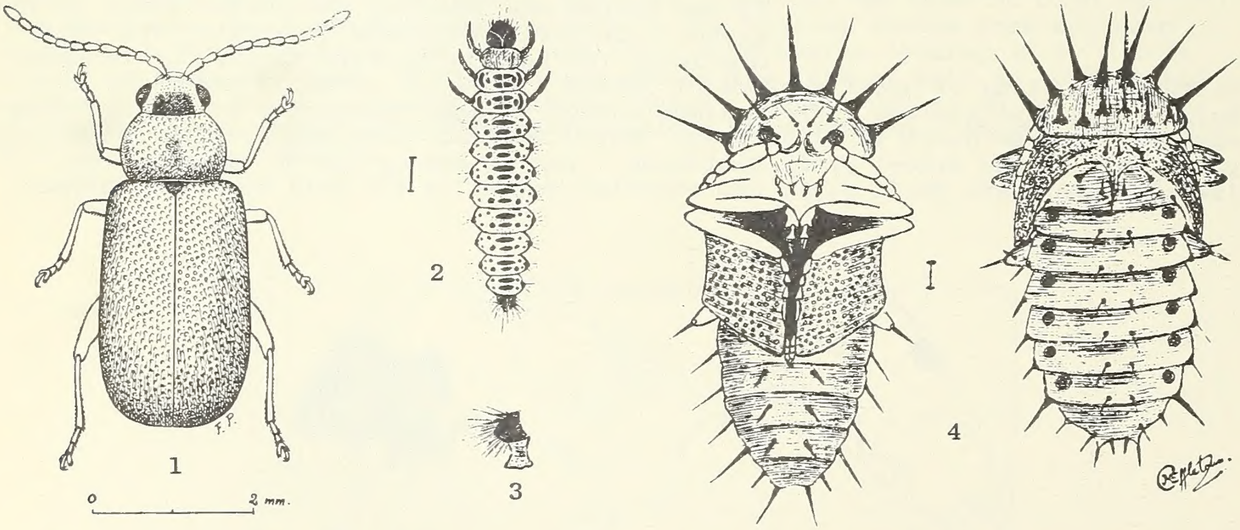
Life History and Habits: In Latvia SSR, the biology was recorded as follows: Eggs are laid in small groups of 2-5 on leaves of host plants. The species prefers damp places and does not migrate to any great degree. Overwintered adults appear in second half of April and feed on stems and upper surface of leaves of strawberry, seriously injuring plants. If the leaves are touched, the beetle drops to the ground. Oviposition occurs from early May until mid-July, the eggs being laid singly, or in small batches, on stems or upper surface of leaves. Eggs are normally deposited in a hole in the leaf surface. The maximum number of eggs oviposited in an insectary was 312. Larvae hatch in 21-32 days. While feeding, they migrate from plant to plant, but do not travel great distances. Larval damage can be severe. The larval stage lasts 22-28 days, and pupation occurs in the soil near the surface.



General Distribution of Galerucella tenella

Young adults emerge in about 15 days and feed until the end of August, when they enter the soil, 2-4 inches deep, for hibernation. Some individuals remain on the plants as late as mid-September.

Description: ADULT - Similar to the elm leaf beetle (*Galerucella xanthomelaena*), but much smaller, 2.75-3.5 mm. in length, and does not have the dark stripe along the sides of each elytra. *G. tenella* is a rather broad species, with yellowish antennae (dark at apex) and pubescence scarce on thorax. Third joint of antenna longer in proportion than the second. Head short, with narrow genae and rather short mandibles. Pair of callosities on forehead distinct and shining; median impression of thorax distinct; subocellate punctures of elytra not deep. Epipleura of elytra continued to apex, with sutural apical angle produced; suture and margin of elytra yellow, with shoulders dark. Legs pale; femora comparatively slender. Central line of thorax and humeral callosities usually infuscate and occasionally elytra marked with a more or less obsolete dark band. Sexual characters different; male with fifth ventral segment of abdomen slightly impressed at apex; same segment in female being almost entire. LARVA - Length 3.2-4.2 mm. Color, dirty greenish-yellow, head black. All segments of body, with exception of head, pronotum and anal segment, with pair of elongate, transverse, rather broad stripes; cephalad stripe being longer than the caudad one. Stripes on meso and metathorax separated as shown in figure below. Dorsal segments transversely furrowed. Each segment of body, with exception of thoracic region, has four shining black tubercles on each side. Tubercles vary in size; largest near transverse stripes. Pronotum free of markings or tubercles and uniformly dark brownish-gray. Meso and metanota have 2 tubercles instead of 4 on each side; inner pair somewhat round, outer pair much larger and somewhat crescent-shaped. Terminal segment brownish-gray and more hairy than rest of body. Legs black, each with 2 sharp claws. Anal segment possesses a large and simple proleg. Body covered with more or less numerous yellow hairs. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 10(51) 12-16-60.



Figures of *Galerucella tenella* L.: 1 - Adult. 2 - Larva. 3 - Anal proleg of larva, lateral view. 4 - Pupa, ventral and dorsal views.

Major references: Fowler, W. W. (1890?), The Coleop. Brit. Ids., Vol. IV, p. 330, London; Efflatoun, H. C., 1918, Ann. Appl. Biol. 4(4):206-210, illus. of larva, pupa, and damage; Ozols, E., 1929, Folia Zool. Hydrobiol. 1(1):113-147.
Figure of adult from Balachowsky, A. and Mesnil, L. 1935. Les Insectes Nuisibles aux Plantes Cultivees. 1137 pp. Paris.

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